## CLAIMS

What is Claimed is:

1. A system that enhances the performance of cochlear implant using preprocessor, the system comprising:

at least one signal input device;

a first processor that processes signals picked up by the at least one signal input device and sends the preprocessed signal to a second processor; and

a second processor that processes and encodes the signal in cochlear implants.

2. The system according to claim 1 wherein the at least one signal input device is one of microphones(s), direct audio input, telecoil, and other forms of analog or digital signals inlet.

3. The system according to claim 1 wherein the first processor is at least one of algorithms or chips used in hearing aids, hearing protectors, and other audio devices.

4. The system according to claim 1 wherein the algorithms of the first processor are implemented in the same chip and case as the algorithms of the second processor.

5. The system according to claim 1 wherein the first processor and at least one signal input device are housed in a first case.

6. The system according to claim 5 wherein the second processor and at least one signal input device are housed in a second case.

7. The system according to claim 6 wherein an output of the first processor is fed into the second processor.

8. The system according to claim 6 wherein the system further comprises:

a wireless transmitter connected to the first processor; and

a wireless receiver connected to the second processor, wherein an output of the first processor is wirelessly transmitted via the wireless transmitter to an input of the second processor via the wireless receiver.

9. The system according to claim 1 wherein the system further comprises a signal input device housed in a first case.

10. The system according to claim 9 wherein the first processor is housed in a first case.

11. The system according to claim 9 wherein the second processor is housed in the first case.

12. The system according to claim 9 wherein the system further comprises a circuit that provides compatibility matching between the first processor and the second processor.

13. The system according to claim 1 wherein the system further comprises signal input devices housed in a first and second case.

14. The system according to claim 13 wherein the first processor is housed in the first case.

15. The system according to claim 14 wherein the second processor is housed in the second case.

16. The system according to claim 13 wherein the second processor receives a processed signal from the first processor via the signal input device in the second case.

17. The system according to claim 1 wherein the system further comprises a signal input device housed in a first case.

18. The system according to claim 17 wherein the first processor and the second processor are housed in a second case.

19. The system according to claim 9 wherein the system further comprises a circuit that provides compatibility matching between the first processor and the second processor.

20. The system according to claim 1 wherein the first processor comprises at least one of:

at least one signal processing stage;

at least one signal processing algorithm; and

at least one component.

21. The system according to claim 20 wherein the second processor utilizes at least a portion of the first processor.

22. The system according to claim 21 wherein the first processor contains at least one signal feeding point and at least one signal extraction point to which connection can be made to feed signals into and extract signal from the system.

23. The system according to claim 1 wherein the system further comprises a second processor that has multiple signal processing stages, wherein the first processor is connected between the multiple signal processing stages of the second processor.

24. The system according to claim 1 wherein the second processor is an amplification device.

25. A method that enhances the performance of a system of a cochlear implant using a pre-processor from a hearing or audio device, the system utilizing at least one signal input device, a first processor, and a second processor, the method comprising:

collecting sounds from a surrounding environment or other hearing or communication devices by the at least one signal input devices;

preprocessing the collected sounds in the first processor;

feeding the preprocessed sounds into the second processor;

processing the sounds in the second processor; and

feeding the processed sounds into a transmitter.

26. The method according to claim 25 wherein the feeding of the preprocessed sounds into the second processor is done over at least one of a wireless medium and a wired medium.

27. The method according to claim 25 wherein the preprocessed sounds are fed into a circuit that provides compatibility matching between the first processor and the second processor.

28. The method according to claim 25 wherein at least a portion of the preprocessing is performed by the second processor.

29. The method according to claim 25 wherein at least a portion of the preprocessing is performed by the first processor.

30. The method according to claim 25 wherein the first processor is capable of receiving signals from two different signal input devices. One possible scenario is that the two different input devices represent microphone inputs placed in or near the two ears for bilateral cochlear implants.

31. The method according to claim 25 wherein the preprocessed signal is fed into two second processors via a "Y" connection for bilateral cochlear implants.